

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

IN RE: GENERAL MOTORS CORP.
AIR CONDITIONING MARKETING
AND SALES PRACTICES LITIGATION

ALL CASES

Case No. 18-md-02818
Hon. Matthew F. Leitman

**ORDER RESOLVING GENERAL MOTORS' MOTIONS
TO EXCLUDE EXPERT TESTIMONY (ECF Nos. 130, 131, 132, 133)**

In this putative consolidated class action, Plaintiffs allege that the air conditioning systems of vehicles manufactured by Defendant General Motors (“GM”) are defective. On March 1, 2022, Plaintiffs moved for class certification. (*See* Mot. for Class Cert., ECF No. 123.) In support of their motion, Plaintiffs offered reports from four experts: Dr. S.A. Sherif, Dr. Garrett Glasgow, Mr. Peter J. Sullivan, and Mr. L. Scott Marshall. GM has now moved to exclude certain opinions from all four experts’ reports. For the reasons explained below, GM’s Motion to Exclude Opinions and Testimony of Plaintiffs’ Expert Dr. S.A. Sherif (ECF No. 130) is **DENIED**; GM’s Motion to Exclude Opinions and Testimony of Plaintiffs’ Expert Dr. Garrett Glasgow (ECF No. 131) is **DENIED**; GM’s Motion to Exclude Opinions and Testimony of Plaintiffs’ Expert Peter J. Sullivan (ECF No. 132) is **GRANTED IN PART** and **DENIED IN PART**; and GM’s Motion to Exclude Opinions and Testimony of Plaintiffs’ Expert L. Scott Marshall (ECF No. 133) is **GRANTED**.

I

A

GM is one of the world's leading automakers. Plaintiffs are consumers who purchased various GM vehicles under the Chevrolet, GMC, and Cadillac brands (the "Class Vehicles"). As the Court has recounted in greater detail in previous orders in this case, Plaintiffs claim that the air conditioning systems in the Class Vehicles are defective and that GM's efforts to repair the defects have failed. (*See, e.g.*, Op. and Order, ECF No. 60.) In particular, Plaintiffs alleged in their Third Amended Complaint that the Class Vehicles "have a defect that causes the [air conditioning systems] to (a) crack and leak refrigerant; (b) lose pressure within the [air conditioning system]; and (c) fail to properly function to provide cooled air into the [v]ehicle's passenger cabin." (Third Am. Compl. at ¶3, ECF No. 91, PageID.3921-3922.) And Plaintiffs have since specified that the designs of two particular components in the air conditioning systems of the Class Vehicles were defective: the combi-cooler, which transfers heat into cool air, and the air conditioner discharge line, which connects units within the air conditioner systems. (*See, e.g.*, Sherif Resp., ECF No. 150, PageID.15246.) Plaintiffs bring claims for breach of the Class Vehicles' express and implied warranties, unjust enrichment, fraud, and violations of the consumer protection laws of various states. (*See* Third Am. Compl., ECF No. 91.)

B

On March 1, 2022, Plaintiffs filed a motion for class certification. (*See* Mot. for Class Cert., ECF No. 123.¹) In that motion, Plaintiffs seek to certify three categories of classes. First, Plaintiffs seek to certify ten separate “state fraud classes” under Federal Rule of Civil Procedure 23(b)(3). (*Id.*, PageID.8422.) These classes include “all persons who purchased or leased a Class Vehicle” in Alabama, Arizona, California, Florida, Michigan, New York, Oklahoma, Tennessee, Texas, and Washington. (*Id.*) Second, Plaintiffs seek class certification for two “state warranty classes” under Rule 23(b)(3). (*Id.*, PageID.8423.) Plaintiffs define these classes as “all persons and entities that purchased or leased a class vehicle” in California or Michigan and “who received warranty service for the AC Defect within the term limits of GM’s warranty.” (*Id.*) Finally, Plaintiffs ask the Court to certify a single, nationwide “Declaratory Judgment Class” under Rule 23(b)(2). (*Id.*) Plaintiffs define this class as “all persons or entities that purchased or leased a Class Vehicle in the United States.” (*Id.*) In support of their motion, Plaintiffs included several supplemental exhibits, including the expert reports identified above.

On April 26, 2022, GM filed motions to exclude certain expert opinion testimony from all four of Plaintiffs’ experts. (*See* Motions, ECF No. 130; ECF No.

¹ Plaintiffs have filed with the Court both an unsealed (*see* ECF No. 122) and a sealed (*see* ECF No. 123) version of their motion for class certification.

131; ECF No. 132; ECF No. 133.) Plaintiffs responded to each of the four motions on May 31, 2022. (*See* Pls.’ Responses, ECF No. 143; ECF No. 144, ECF No. 148; ECF No. 150.) The Court held a video hearing on the motions on October 28, 2022.

II

A

GM primarily argues that the Court should exclude the expert opinion testimony at issue because the testimony does not satisfy Rule 702 of the Federal Rules of Evidence.² Under that rule, “a proposed expert’s opinion is admissible, at the discretion of the trial court, if the opinion satisfies three requirements.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 528-29 (6th Cir. 2008). First, the expert witness must be qualified by “knowledge, skill, experience, training, or education.” *Id.* (quoting Fed. R. Evid. 702). In assessing an expert’s qualifications, a court

² Rule 702 provides as follows:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

should not focus on the expert's credentials "in the abstract." *Berry v. City of Detroit*, 25 F.3d 1342, 1351 (6th Cir. 1994). Instead, a court must determine whether the expert's "qualifications provide a foundation for [her] to answer [the] specific question" at issue in the litigation. *Id.* Second, "the [expert's] testimony must be relevant, meaning that it 'will assist the trier of fact to understand the evidence or to determine a fact in issue.'" *Id.* (quoting Fed. R. Evid. 702). Third, the expert's testimony must be reliable, meaning that it must be "based on sufficient facts or data" as well as "reliable principles and methods," and the expert must have "applied the principles and methods reliably to the facts of the case." *Id.* (citing Fed. R. Evid. 702).

District courts have "broad discretion as [] 'gatekeeper[s]' to determine the admissibility" of expert testimony. *Pride v. BIC Corp.*, 218 F.3d 566, 578 (6th Cir. 2000). However, "rejection of expert testimony is the exception, rather than the rule." *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530 (quoting Fed. R. Evid. 702 advisory committee's note). Indeed, "mere weaknesses in the factual basis of an expert witness' opinion ... bear on the weight of the evidence rather than on its admissibility." *Id.* (internal quotations and citations omitted).

In *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), the Supreme Court stressed that there is no "definitive checklist or test" that a district court must apply when considering the reliability of expert testimony. *Id.* at 590. Yet, at the

same time, the Supreme Court identified “several factors that a district court should consider when evaluating the scientific validity [and reliability] of expert testimony, notably: the testability of the expert’s hypotheses (whether they can be or have been tested), whether the expert’s methodology has been subjected to peer review, the rate of error associated with the methodology, and whether the methodology is generally accepted within the scientific community.” *Pride*, 218 F.3d at 577 (citing *Daubert*, 509 U.S. at 593-94).

In addition, “*Daubert* and its progeny make clear that ‘[p]roposed [scientific expert] testimony must be supported by appropriate validation.’” *Id.* at 578 (quoting *Daubert*, 509 U.S. at 591). As the Sixth Circuit recognized following *Daubert*, “[t]he party seeking to have testimony admitted bears the burden of showing that the expert’s findings are based on sound science, and this will require some objective, independent validation of the expert’s methodology; the expert’s bald assurance of validity is not enough.” *Smelser v. Norfolk S. Ry.*, 105 F.3d 299, 303 (6th Cir. 1997) (internal quotation marks omitted), *abrogated on other grounds by Morales v. Am. Honda Motor Co., Inc.*, 151 F.3d 500 (6th Cir. 1998).

The *Daubert* “factors, while perhaps most apt in evaluating a purely scientific discipline, can also apply in evaluating non-scientific fields that are ‘technical’ or ‘specialized’ in nature.” *United States v. Mallory*, 902 F.3d 584, 593 (6th Cir. 2018) (quoting *Kuhmo Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 149-53 (1999)).

However, these factors may not be useful in evaluating the reliability of some types of expert testimony, and thus applying the “factors [is] not mandatory in every case.” *Id.* For instance, the *Daubert* factors may be “unhelpful” where an expert’s opinion testimony is based entirely upon his personal knowledge and “practical experiences.” *First Tenn. Bank Nat. Ass’n v. Barreto*, 268 F.3d 319, 335 (6th Cir. 2001); *see also Wood v. Wal-Mart Stores E., LP*, 576 F. App’x 470 (6th Cir. 2014) (same).

Finally, “nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit evidence that is connected to existing data by the *ipse dixit* of the expert.” *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). In the end, “[t]he questions of what factors to apply and what conclusions to draw about an expert’s reliability are entrusted to the district court’s discretion.” *Mallory*, 902 F.3d at 593; *see also Kuhmo Tire*, 526 U.S. at 141 (“[W]hether *Daubert*’s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine.”).

B

GM also moves to exclude much of Plaintiffs’ expert opinion testimony under Rule 403 of the Federal Rules of Evidence. That rule provides, in relevant part, that a “court may exclude relevant evidence if its probative value is substantially outweighed by a danger of ... unfair prejudice, confusing the issues, [or] misleading

the jury.” Fed. R. Evid. 403. As the Sixth Circuit has explained, Rule 403 “provides a balancing test for excluding relevant evidence.” *United States v. Clark*, 24 F.4th 565, 579 (6th Cir. 2022). District courts have “very broad discretion” in conducting this balancing test, *United States v. Vance*, 871 F.2d 572, 576 (6th Cir. 1989), but Rule 403 “is strongly weighted toward admission.” *United States v. Asher*, 910 F.3d 854, 860 (6th Cir. 2018). Indeed, the Court should “look at the evidence in the light most favorable to its proponent, maximizing its probative value and minimizing its prejudicial effect.” *United States v. Poulsen*, 655 F.3d 492, 509 (6th Cir. 2011). And the Court may only exclude relevant evidence under Rule 403 when the evidence would “result in unfair prejudice.” *United States v. Bonds*, 12 F.3d 540, 567 (6th Cir. 1993).

III

A

The Court begins with GM’s motion to exclude certain opinions advanced by Dr. Sherif. (*See* Sherif Mot., ECF No. 130.) Dr. Sherif is a Professor of Mechanical and Aerospace Engineering at the University of Florida. (*See* Sherif Rpt., ECF No. 130-4, PageID.10573, 10575.) His 46-year career includes experience in “academia, national labs, and engineering design and consulting.” (*Id.*) He has designed air conditioning systems for NASA, the United States Navy, and the United States Air Force, and he has received several awards for his research contributions regarding

thermal control systems. (*See id.*) Dr. Sherif has also served as an expert witness in “more than a dozen cases where thermal engineering expertise was required,” several of which involved “automotive air conditioning systems.” (*Id.*, PageID.10576.)

Plaintiffs retained Dr. Sherif to “investigate the root causes of failure and refrigerant leak in the air conditioning systems of the Class Vehicles.” (*Id.*) In the course of his investigation, Dr. Sherif reviewed GM documents and transcripts of depositions taken in this action. (*See id.*) In relevant part, Dr. Sherif concluded that: (1) the design of the combi-coolers in all of the Class Vehicles was inherently defective because it was susceptible to “severe thermal cycling” that “renders the vehicles’ [air conditioning] systems unfit for their ordinary and intended purpose”; and (2) the design of the air conditioning compressor discharge lines in all of the Class Vehicles built before December 2014 was inherently defective and “susceptible to sustained resonant frequency exposure,” which causes cracking and “subsequent failure of the air conditioning system.” (*Id.*, PageID.10588.)

B

GM has moved to exclude Dr. Sherif’s conclusions that the designs of the combi-coolers and discharge lines in the Class Vehicles were inherently defective. (*See Sherif Mot.*, ECF No. 130.) GM primarily argues that Dr. Sherif’s opinions should be excluded under Rule 702 because they “lack foundation and are not the

product of reliable scientific methodology.” (*Id.*, PageID.10467.) The Court disagrees.

First, GM argues that Dr. Sherif’s opinions lack a sufficient foundation because “he has never been involved with designing an automotive air conditioning system.” (*Id.*, PageID.10484.) But Dr. Sherif’s lack of automotive-specific experience does not render his opinions inadmissible. As noted above, Dr. Sherif has substantial experience with air conditioning systems in other vehicles. Indeed, he has studied and designed thermal control systems in NASA spacecraft, U.S. Air Force aircraft, and U.S. Navy hovercraft, all of which are *more* complex than automotive air conditioning systems. (*See* Sherif Dep., ECF No 150-5, PageID.15300.) And, as Dr. Sherif explained during his deposition, air conditioning systems in automobiles are designed according to the same principles as air conditioning systems in any other vehicle. (*See id.*) Simply put, Dr. Sherif and Plaintiffs have adequately demonstrated that Dr. Sherif’s broad and substantial experience with the study and design of air conditioning systems provided a solid and reliable foundation for his opinions about the air conditioning systems at issue here.

GM next argues that Dr. Sherif’s opinions are not based on sufficient facts or a reliable methodology because “he did not conduct a single inspection, examination, test, or analysis of the vehicles or component parts at issue in this

litigation.” (Sherif Mot., ECF No. 130, PageID.10484.) But Dr. Sherif did not need to inspect or test the vehicles or components at issue here in order to opine on the sufficiency of their design. Instead, he was reasonably capable of assessing the designs by reviewing design drawings and applying his substantial knowledge and experience to those drawings. Under these circumstances, the fact that Dr. Sherif did not test the vehicles or components goes “to the weight of his testimony ... not to its admissibility.” *Clay v. Ford Motor Co.*, 215 F.3d 663, 668 (6th Cir. 2000) (affirming decision of district court to admit expert testimony that vehicle was defective even though expert did not perform any testing and did not physically inspect the vehicle).

Third, GM argues that Dr. Sherif “overlooked or minimized record evidence, such as warranty data, the myriad and highly driver-dependent factors that might influence discharge line failures, and the fact that the combi-cooler design is not exclusive to GM.” (Sherif Mot., ECF No. 130, PageID.10475.) However, these alleged “weaknesses in the factual basis of [Dr. Sherif’s] opinion ... bear on the weight [to be given to his opinion] rather than on its admissibility.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530 (internal quotations and citations omitted).

Next, GM asserts that Dr. Sherif’s opinions “invade the province of the jury” because he “merely summarizes GM documents that he misleadingly claims support his finding that all of the discharge lines and all of the combi-coolers are defective.”

(Sherif Mot., ECF No. 130, PageID.10487.) But Dr. Sherif does more than “merely summarize” GM documents. He reviewed the documents, analyzed them, and applied his experience and knowledge when assessing their contents and their significance. Dr. Sherif’s opinions and analysis will assist the jury in understanding the issues and key documents in this case; they will not invade the jury’s province.

Finally, GM argues that Dr. Sherif’s testimony is inadmissible under Rule 403 for the same reasons that it is inadmissible under Rule 702. (*See id.*, PageID.10488.) But the Court has concluded that the testimony satisfies the requirements for admission under Rule 702, and thus it will not exclude the testimony under Rule 403. GM’s motion to exclude Dr. Sherif’s opinions is therefore **DENIED**.

IV

A

The Court next turns to GM’s motion to exclude the opinions and testimony of Dr. Glasgow. (*See* Glasgow Mot., ECF No. 131.) Dr. Glasgow is an Associate Director of NERA Economic Consulting, Inc. He has a Ph.D. in Social Sciences and has taught several classes regarding statistical research methods at the undergraduate and graduate levels. (*See* Glasgow Rpt., ECF No. 131-4, PageID.10931.) Dr. Glasgow has also testified as an expert witness on damages in “a variety of class action cases.” (*Id.*)

Plaintiffs retained Dr. Glasgow to opine as to, among other things, whether damages can be calculated on a class-wide basis. In his report, Dr. Glasgow opined that he will be able “to calculate damages (if any) formulaically [on a class-wide basis].” (*Id.*, PageID.10933.) More specifically, Dr. Glasgow explained that “it is possible to calculate the difference in market price between a vehicle in which GM disclosed the alleged defects, and the market price where GM did not disclose the defects.” (*Id.*, PageID.10933.) Dr. Glasgow said that this can be done by first determining “whether consumer demand in the ‘but for’ world (when the alleged defects are disclosed) is different from consumer demand in the ‘actual’ world (when GM did not disclose the defects).” (*Id.*) After making this determination about whether disclosing the alleged defects would have impacted consumer demand, Dr. Glasgow could then “determine how the market would react to any change in demand to calculate the ‘price premium’” that the Plaintiffs paid. (*Id.*)

Dr. Glasgow gave the following broad overview of his methodology:

- i. I can determine any effect of the disclosure of the air conditioning defects on consumer preferences through a type of survey experiment known as a “choice-based conjoint analysis.” Conjoint analysis is commonly used in market research, both in and out of litigation. This choice-based conjoint experiment will present respondents with a series of questions that ask them to select a most preferred product among several available options with different attributes, including price and the presence/absence of the defects. By observing the tradeoffs that consumers make between price and the presence/absence of the defects, I can calculate the

distribution of the “willingness to pay” to avoid the defects across consumers. The willingness to pay measures the effect of disclosing the defects on demand for the Class Vehicles, if there is such an effect.

- ii. I can then combine information on the willingness to pay to avoid the defects with supply side information, such as market shares, to determine the effect of the disclosure of the defects on equilibrium market prices. Economic market simulations such as the one I propose to undertake have a long history in the academic literature and are increasingly used in litigation. Any difference in equilibrium market prices between the “actual” world in which the defects are not revealed and the “but-for” world in which the defects are revealed is the price premium associated with the failure to disclose the defects. This price premium could likely be calculated under the assumption that GM would supply the same number of Class Vehicles as was supplied historically in the but-for world after the defects were disclosed to consumers, or under the assumption that GM would supply the profit maximizing number of Class Vehicles (which may differ from historic sales) after the defects were disclosed to consumers.

(*Id.*, PageID.10934-10935.)

B

GM urges the Court to exclude Dr. Glasgow’s opinions under Rule 702 on several grounds. For the reasons explained below, GM’s arguments do not persuade the Court that it should exclude Dr. Glasgow’s current opinions.

But before the Court turns to GM’s arguments, it is essential to clarify the precise question now before the Court with respect to Dr. Glasgow. The question is *not* whether Dr. Glasgow’s opinions persuasively establish that damages may be

calculated on a class-wide basis. Instead, the question is a much narrower one: are Dr. Glasgow's opinions sufficiently reliable that the Court may at least consider them when, at the class certification stage, the Court evaluates whether damages may be calculated on a class-wide basis? The Court's determination – explained in more detail below – that Dr. Glasgow's opinions clear the threshold for admissibility does not mean that the Court finds the opinions to be persuasive or that the Court has reached any conclusions as to whether damages may be calculated on a class-wide basis. The Court has not yet reached any firm conclusions on those issues. The Court will focus more on the ultimate persuasiveness of Dr. Glasgow's opinions when it decides Plaintiffs' motion for class certification.

C

1

GM first argues that the Court should exclude Dr. Glasgow's opinions because he did not provide sufficient details concerning the conjoint analysis that he will be conducting. (*See* Glasgow Mot., ECF No. 131, PageID.10835-10839.) GM contends that the opinions are “purely speculative” and “impermissibly vague” because Dr. Glasgow “fail[ed] to specify, much less actually perform, his proposed conjoint survey or market simulations” and “fail[ed] to conduct any analysis.” (*Id.*, PageID.10835-10836.) The Court disagrees.

Even though Dr. Glasgow has not yet finalized the survey he will conduct or analyzed any data, he provided enough information concerning his proposed methodology to make admissible his opinion that it is possible to calculate damages on a class-wide basis. He described how he will design and implement his conjoint analysis in more than seventy paragraphs over twenty-eight pages of his expert report. (*See* Glasgow Rpt., ECF No. 131-4.) His report is broken down into sections that explain the process he will use to calculate class-wide damages from start to finish. And many of the sections contain numerous citations to supporting academic literature. Below, the Court provides a section-by-section overview of Dr. Glasgow's report to help illustrate the amount of information he provided concerning his proposed methodology. The Court addresses each section in the order in which they appear in the report.

2

Section V-A, titled "Choice-Based Survey Methods." In this first section of his analysis, Dr. Glasgow provided background information about choice-based survey methods like the method he proposes to use. Dr. Glasgow explained that "[c]hoice based surveys (including conjoint methods) are a generally accepted approach and are commonly used in academic and commercial market research to help companies estimate the value of the attributes of a product. Many companies use conjoint methods to identify the importance of product attributes and inform

pricing decisions – GM has used conjoint analysis to evaluate vehicle attributes since the early 1970s.” (*Id.*, PageID.10938.) He added that “[c]onjoint surveys have also been used in litigation, and the methodology has been accepted by several Courts, including in consumer class actions,” and he explained that he “will adopt this accepted methodology for my own survey, and undertake a choice-based conjoint analysis to evaluate the influence of the disclosure of the air conditioning defect on consumer preferences for the Class Vehicles.” (*Id.*, PageID.10939.)

Section V-B, titled “Survey Design.” As the title suggests, in this portion of his report, Dr. Glasgow described how he will design his survey to measure consumer preferences. Dr. Glasgow explained, among other things, that:

- He “will utilize a randomized experimental design.” (*Id.*) This design calls for a randomly-selected “treatment” group to be informed that the Class Vehicles presented to them are known to have defects in their air conditioning units, while a separate “control” group will be presented with the same Class Vehicles without any disclosure about the alleged defects. (*See id.*, PageID.10939-10940.)
- Other than the disclosure regarding the alleged defects, “the conjoint survey will be conducted in an identical manner for the treatment and control groups.” (*Id.*, PageID.10940.) This helps to “ensure[] that any difference in choice behavior between the treatment and control groups

cannot be due to aspects of the survey design other than the disclosure.”

(*Id.*) Moreover, Dr. Glasgow explained that he will use “the random assignment of respondents to the treatment and control groups [in order to] ensure[] that any differences in choice behavior we observe between these groups are unlikely to be due to differences in the characteristics of the respondents assigned to these groups.” (*Id.*) According to Dr. Glasgow, “the only plausible explanation for differences between the treatment and control groups in vehicle preference will be the effect of the disclosure [of the defects].” (*Id.*, PageID.10940.)

- Dr. Glasgow’s methodology is known as a “between-subjects” design, as “the treatment (disclosure of the defect) only varies between individuals and does not vary within the version of the survey presented to a single respondent (which would be a ‘within-subjects’ design).” (*Id.*, PageID.10940.) Dr. Glasgow cited academic literature that, he explained, supports the conclusion that between-subjects designs “attract less attention to the experimental treatment, and thus should be less susceptible to survey response bias, particularly if the treatment is controversial or sensitive (as a product defect might be).” (*Id.*, PageID.10940.) And he added (with supporting citations) that

“[c]onjoint designs with between-subjects treatments are increasingly seen in the peer-reviewed academic literature.” (*Id.*)

- The respondents in both groups “will be presented with a series of questions asking them to select their most preferred vehicle from among a set of vehicles that vary in their attributes (for instance, price and make/model).” (*Id.*, PageID.10941.) As Dr. Glasgow explained, “by observing the tradeoffs respondents make when selecting their most preferred vehicle, I will be able to determine the relative value that respondents place on the options within each attribute (the ‘levels’), including the value placed on avoiding the defect.” (*Id.*, PageID.10942.)
- Dr. Glasgow will “implement separate versions of the survey for SUVs and pickup trucks,” since the two types of vehicles target separate market segments. (*Id.*, PageID.10941-10942.)
- He will also “implement separate versions of the survey for new and certified pre-owned vehicles.” (*Id.*)
- Dr. Glasgow will use make, brand, model, and price to describe the vehicles in his survey. (*See id.*, PageID.10943.) He will also inform the survey respondents that “the displayed price for each vehicle is the final, ‘out-the-door’ price.” (*Id.*)

- Dr. Glasgow may use other attributes to describe the vehicles. Dr. Glasgow explained that “these [additional] attributes will be determined in part by the focus groups I will conduct before fielding the study, as well as a review of all available GM marketing studies and a comparison of these studies to the focus group results. Should other relevant information become available, such as third-party studies of important vehicle attributes, I will also draw on them to inform my choice of attributes.” (*Id.*, PageID.10944.)
- Dr. Glasgow plans to “follow the standard rule of thumb (for conjoint analyses) of not exceeding eight attributes in total.” (*Id.*)
- Once Dr. Glasgow determines which attributes he will use to describe the vehicles, he will present respondents with “choice sets” containing a limited number of vehicles and will ask the respondents to select their most preferred vehicles from among the choice sets. (*See id.*, PageID.10945.) “The number of vehicles presented in each choice set and the number of choice sets,” Dr. Glasgow explained, “will depend in part on the number of attributes and attribute levels, but typically choice-based conjoint surveys have 10-16 choice sets, each with 3 or 4 options for respondents to choose from.” (*Id.*)

- Dr. Glasgow then plans to ask respondents whether they would purchase their preferred vehicle at the listed price. (*See id.*) According to Dr. Glasgow, “this ‘dual response’ design allows the survey respondents to indicate that none of the vehicles presented in the choice set were acceptable, while not allowing respondents to opt out of difficult tradeoffs. This ‘no purchase’ option may also be important in identifying the market share for the ‘outside option’ in the market simulation.” (*Id.*)

Section V-C, titled “Survey Population.” In this section, Dr. Glasgow explained that his survey population “will represent the marketplace of consumers who previously shopped for, or are currently shopping for, vehicles in the same market segments as the Class Vehicles.” (*Id.*, PageID.10945.) He further explained that “[a] nationwide study is the appropriate population for this survey as Plaintiffs seek to certify a nationwide class of consumers. If a set of state subclasses rather than a nationwide class of consumers is certified, the survey population can be limited to just consumers in those states to the extent appropriate without changing any of the other methodology described [in his report].” (*Id.*, PageID.10946.)

Section V-D, titled “Sampling of the Relevant Population.” In this section, Dr. Glasgow explained that he plans to contact survey respondents “using an internet panel hosted by Dynata,” an online platform with “an internet panel of over 62

million consumers and business professionals worldwide.” (*Id.*) Dr. Glasgow also outlined a number of “qualifying conditions” that the survey respondents will be required to satisfy before they are selected to participate in the survey – for example, the respondents must have “purchased a new or certified pre-owned pickup truck or an SUV any time between 2013...and the present day” and must be “the sole or primary decision maker, or one of the decision makers, in decisions related to the purchase of a motor vehicle[] for the household.”³ (*Id.*, PageID.10948.) He plans to select a random sample of qualified respondents who have passed his initial screening questions, as “this random selection procedure will ensure that all adult panelists meeting the criteria will have the opportunity to participate in the survey.” (*Id.*) Dr. Glasgow will then divide the selected sample such that “half of the sample for each version of the survey (pickup truck and SUV, new and certified pre-owned) is composed of putative Class members.” (*Id.*, PageID.10949.) In total, Dr. Glasgow plans to “target approximately 1000 respondents (approximately 500 treatment and

³ To qualify for the conjoint analysis, respondents must also “indicate that they understand and are willing to adhere to the survey instructions;” “correctly answer a CAPTCHA question to ensure that a person, and not a computer or ‘bot,’ was taking the survey;” “enter a gender, age, state of residence, and zip code that match the respondent information on file with Dynata;” “complete the survey on a desktop, laptop, or tablet computer (in order to ensure the images in the choice portion of the survey are properly displayed);” “be 18 years of age or older;” “live in the U.S.,” and “report that neither they, nor anyone in their household, are employed in any of the following: an advertising company, a market research firm, or a company that manufactures, distributes, or sells either motor vehicles or air conditioners.” (Glasgow Rpt., ECF No. 131-4, PageID.10947-10948.)

500 control) for each version of the survey (SUV or pickup truck, new or certified pre-owned), for a total of approximately 4000 respondents.” (*Id.*)

Section V-E, titled “Focus Groups.” In this section, Dr. Glasgow explained that he will use focus groups to “identify relevant vehicle attributes to include in the choice portion of the survey” and to “test the language of the disclosure of the air conditioning defect.” (*Id.*, PageID.10950.) To achieve this first goal, “an independent third party will ask qualifying participants a series of questions about their vehicle purchasing habits” in order to identify the attributes that consumers tend to care about when purchasing vehicles. (*Id.*, PageID.10950.) And in order to help Dr. Glasgow determine how to phrase the disclosures in his survey, “focus group participants will be shown several versions of the disclosure, and asked to explain their understanding of the disclosure.” (*Id.*) As Dr. Glasgow explained:

The two different alleged defects (the defect in the discharge line and the defect in the “Combi-Cooler”) will also be described, along with the consequences of each defect, in order to determine if separate disclosures are needed for each alleged defect. The language of the disclosure (or disclosures) may be adjusted for later focus groups based on feedback from the initial groups. This will allow me to create a disclosure in the survey that will accurately capture the nature of the alleged defect, including the effect of warranty coverage (if any) and the rate of defect manifestation (including differences in the rate of manifestation between the two alleged defects, if any).

(*Id.*)

Section V-F, titled “Survey Pre-Test.” In this section, Dr. Glasgow explained that, before he actually conducts his survey, he plans to test the survey instrument by having a number of respondents take the survey and explain their understanding of the survey questions as they are taking it. (*See id.*, PageID.10951.) He will “personally listen to or read the transcripts of all of the pre-test interviews, as well at least one other member of [his] NERA research staff. The survey instrument may be adjusted based on the results of this pre-test.” (*Id.*, PageID.10952.) As a “final quality test,” Dr. Glasgow plans to implement a “soft launch” of the survey, where he will obtain approximately 50 responses and examine them “for evidence of respondent confusion or inattention.” (*Id.*)

Section V-G, titled “Additional Quality Control Measures for the Survey.” In this section, Dr. Glasgow first noted that he will rely on Dynata’s quality control measures, which “include digital fingerprinting to prevent individual respondents from taking the survey multiple times, as well as verification procedures to ensure that respondents are authentic.” (*Id.*) He added that he will conduct the survey using a “double-blind” method where “neither the staff at Dynata nor any of the respondents will be aware of the survey sponsor or the ultimate intention of the survey.” (*Id.*) And Dr. Glasgow said that he will implement a number of his own final quality control measures, including asking participants why they selected the vehicle they chose and reviewing respondents’ responses to remove “vague or

nonsensical answers, since these respondents are unlikely to have attended carefully to the choice task.” (*Id.*, PageID.10953.) Dr. Glasgow also plans to remove respondents who “always select the same option (such as the first option presented in each choice task), since these respondents are unlikely to have attended carefully to the choice tasks;” remove respondents who indicate that they have purchased or were intending to purchase all of the products in at least one of the screening questions, since these respondents may be attempting to qualify for the survey by selecting all options in the screening question;” and “remove respondents who complete the choice tasks too quickly (‘speeders’) since they are unlikely to have put sufficient effort into answering the questions.” (*Id.*, PageID.10953.)

Section V-H, titled “Estimation of the Choice Model.” In this section, Dr. Glasgow explained how he will use the survey responses to estimate “the influence of each attribute on the choices made by the survey respondents.” (*Id.*) To do this, Dr. Glasgow plans to use a “mixed logit model,” which is “a statistical model that will allow me to estimate the probability that an individual would make a particular choice from a set of options, while accounting for heterogeneity in preferences across individuals.” (*Id.*) Dr. Glasgow explained that “for each attribute, the mixed logit model estimates the mean and standard deviation of a randomly distributed coefficient, which measures the distribution of preferences for an attribute across the survey respondents.” (*Id.*) “To estimate the effect of the disclosure on preferences

for vehicles,” Dr. Glasgow “will create an additional attribute that indicates the Class Vehicles subject to the disclosure of the air conditioning defect. The coefficient on this additional variable (often known as an ‘interaction variable’) will measure the difference in preferences for the Class Vehicles between the respondents in the treatment group (who were shown the disclosure) and the respondents in the control group (who were not shown the disclosure).” (*Id.*, PageID.10955.) Dr. Glasgow noted (with supporting citations) that he has “extensive experience in estimating mixed logit models of this type, both in litigation and academic research.” (*Id.*, PageID.10954.)

Section VI-A, titled “Willingness to Pay to Avoid the Defects.” In this section (and for the next several sections), Dr. Glasgow described how he will calculate any price premium. Once he has calculated the decrease in consumer demand using the mixed logit model described above, Dr. Glasgow plans to measure consumers’ “willingness to pay (WTP) to avoid the defects in the Class Vehicles.” (*Id.*, PageID.10956.) He explained that “willingness to pay” measures “the additional amount consumers would be willing to pay for a non-defective Class Vehicle, or alternatively, the discount required to induce consumers to purchase a Class Vehicle once the defects are disclosed.” (*Id.*) Dr. Glasgow further explained that “the WTP for a [particular] feature in the mixed logit I describe[d] above is calculated by

dividing the distribution of the random coefficient on the disclosure by the random coefficient on price.” (*Id.*)

Section VI-B, titled “Price Premiums and the But-For World.” In this section, Dr. Glasgow explained how he plans to consider supply side factors in calculating any premium in the market price for the Class Vehicles. (*See id.*, PageID.10957.) He explained that “the most important supply side factor in calculating the price premium is the determination of what quantity of Class Vehicles GM would seek to supply in the but-for world in which the defect in the air conditioning unit has been disclosed to consumers.” (*Id.*) Dr. Glasgow further explained that there are two possible approaches he could take to estimate the quantity of Class Vehicles GM would supply in his model. First, “one possible but-for world is that GM would supply the same number of Class Vehicles in the but-for world as was supplied historically, since this is the amount that has already been sold.” (*Id.*) “Another possible but-for world,” Dr. Glasgow continued, would be to “assume that GM would supply the profit maximizing number of Class Vehicles after the defect was disclosed to consumers.” (*Id.*) In this but-for world, “the profit maximizing response [in some cases] will be to sell fewer vehicles at a higher price than would be required to sell the same number of Class Vehicles supplied historically.” (*Id.*, PageID.10958.) Dr. Glasgow then included a graph that displayed “[t]he general relationship between a decrease in demand (*i.e.*, a reduction in WTP for a product)

and market price.” (*Id.*, PageID.10958-10959.) The graph also displayed (1) how the willingness to pay decreased when the “defects are disclosed” and (2) “the amount by which GM would need to reduce its market price in order to sell the same number of Class Vehicle in the but-for world when the defect is disclosed.” (*Id.*, PageID.10959.) Finally, Dr. Glasgow explained that by using the graph, he will be able to determine “the difference between the existing equilibrium market price and the equilibrium market price in the but-for world where the defects in the Class Vehicle have been disclosed to consumers. This is the price premium associated with the failure to disclose the defects, or the amount by which consumers were overcharged.” (*Id.*, PageID.10960.) The graph can also help Dr. Glasgow determine “the drop in market share for this type of Class Vehicle in the but-for world where the defects have been disclosed. The market share for this Class Vehicle declines because some consumers in the but-for world would not purchase this vehicle due to the disclosure of the defects. For these consumers, the amount of the overcharge represents a conservative estimate of their damages – these consumers were overcharged for a product that they would not have purchased at all had the defects been disclosed.” (*Id.*)

Section VI-C, titled “Calculation of the Price Premium through a Market Simulation.” In this section, Dr. Glasgow explained that he will conduct a market simulation to calculate the price premium the plaintiffs allegedly paid because GM

failed to disclose the defects. (*See id.*) According to Dr. Glasgow, “there is an extensive academic literature that focuses on combining the consumer demand side of the market with the supply side of the market to determine the market equilibrium.” (*Id.*) The market simulations that Dr. Glasgow described will take into account “both the costs of production and consumer demand for the product” in order to calculate where a “profit-maximizing company will price its product.” (*Id.*, PageID.10961.) To conduct his market simulation, Dr. Glasgow will obtain “retail market shares, prices, and the marginal cost of production” for “both new and certified pre-owned vehicles in the U.S. pickup truck and SUV market segments from historic sales data for the same model years as the Class Vehicles (2014-2017).” (*Id.*, PageID.10961-10962.) Dr. Glasgow will then calculate the “equilibrium market price,” which is “an estimate of how all transactions in the market will be affected by [a] change in demand,” and he will apply that equilibrium market price to the transactions in the market simulation. (*Id.*, PageID.10963-10964.) According to Dr. Glasgow, “calculations of percentage changes in vehicle prices due to the disclosure of product defects have been used by the automotive industry in the past.” (*Id.*, PageID.10964.)

Dr. Glasgow also explained that he plans to estimate the marginal costs of producing the Class Vehicles “based on the observed market shares and prices for the vehicles, as well as estimates of consumer reactions to price changes (price

elasticities and cross-elasticities) that I will estimate from the survey data, under the assumption that all vehicle manufacturers are profit maximizing at these observed values.” (*Id.*, PageID.10964.) He said that “estimating marginal costs in market simulations in this way is a commonly accepted practice among economists.” (*Id.*, PageID.10965.) Dr. Glasgow also explained that “the marginal cost for new vehicles is the cost of manufacturing the vehicle along with other related costs, while the marginal cost for certified pre-owned vehicles is the cost of obtaining, inspecting, and refurbishing the vehicle, along with other related costs.” (*Id.*) He plans to incorporate any “more detailed information on the actual marginal costs for one or more vehicle manufacturers” if they become available, but he confirmed that he could “undertake the market simulations even if such information is unavailable.” (*Id.*)

Section VI-D, titled “Total Overcharge and Uncertainty in the Overcharge Estimates.” Finally, in this section, Dr. Glasgow explained that he will determine “the total overcharge for each putative Class member[]” by “multiplying the transaction cost for that member by the percentage overcharge calculated in the market simulation.” (*Id.*) He plans to “calculate alternative versions of the market simulations using any plausible alternative inputs I can identify,” and to “calculate a range of possible overcharge percentages based on the 95% confidence interval on

the mixed logit coefficient measuring the effect of the disclosure on consumer preferences.” (*Id.*, PageID.10966.)

3

GM has not cited any cases in which a court has excluded a damages opinion where the damages expert has provided the amount of information concerning his methodology that Dr. Glasgow has provided here. Indeed, it appears that Dr. Glasgow has provided substantially more information concerning his proposed survey and analysis than did the damages experts in the cases GM cites in support of its argument that his opinions are unduly vague. For instance, in *In re Dial Complete Marketing and Sales Practices Litig.*, 312 F.R.D. 36, 79-80 (D.N.H. 2015), the court excluded the opinions of two experts that damages could be computed on a class-wide basis using a conjoint analysis because the experts did little more than “discuss how conjoint analysis works generally.” Likewise, in *Miller v. Fuhu*, 2015 WL 7776794, at *22 (C.D. Cal., Dec. 1, 2015), the court excluded an opinion similar to that offered by Dr. Glasgow only after being “particularly troubl[ed]” by both the expert’s testimony “that if ‘asked to do a survey’ he would ‘start the evaluation process all over especially as I acquire more information about the matters in the case’” and the expert’s refusal to “‘say conclusively which of the two methods [Contingent Valuation Method or Choice-Based Conjoint Analysis] I’m going to use.’” Finally, in *In re Conagra Foods*, 302

F.R.D. 537, 552-53 (C.D. Cal. 2014), the court excluded an expert's opinion that damages could be computed on a class-wide basis using a conjoint analysis where (in the words of the party offering the expert) the expert merely "offer[ed] a basic description of the manner in which ... conjoint analysis operate[s]." None of these cases provide strong support for excluding Dr. Glasgow's opinions.

On the other hand, several relevant cases support admitting Dr. Glasgow's opinions even though he has not finalized every last detail of his proposed conjoint analysis or actually conducted his survey. For instance, in *Flynn v. FCA USA LLC*, 2018 WL 2063871 (S.D. Ill, Jan. 31, 2018), the court declined to exclude opinions offered by an expert who was at roughly the same stage in his analysis as Dr. Glasgow is here. In a passage worth quoting at length, the court explained:

Williams [one of the damages experts] explains that price is determined by the principles of supply and demand. One methodology that he recommended to determine price, or a consumer's willingness to pay, in the so-called "but-for" universe is a Discrete Choice Experiment ("DCE"), which combines survey information and econometric techniques to estimate the willingness of consumers to pay for products or services that may not have observable prices. A DCE is an enhanced form of conjoint analysis, a methodology often used to calculate damages in class actions. In addition to a DCE, Williams' opinion testimony is based on the economic theory that people maximize their expected utility when making decisions.

Plaintiffs suggest two different methods for calculating damages: (1) overpayment damages (i.e. the difference in cost between the actual purchase price and the price consumers would've paid had Defendants disclosed the

defects); or (2) the cost of repairing the cybersecurity defects in the class vehicles. Williams' opinion concludes that overpayment damages can be calculated using common economic principles. Using a survey, which will be conducted by Michael A. Kemp in the future, Williams claims he could measure and quantify the drop in demand to create supply and demand curves to reach the prices consumers would have paid had the defects been disclosed. To that end, Michael A. Kemp has been retained by Plaintiffs to testify as to the feasibility of obtaining reliable information indicating consumer valuations for protective or remedial measures against hacking vulnerabilities at the class certification stage. Kemp has designed and carried out survey research studies for various industries for over 50 years. He has 30 years of experience designing and executing the type of choice survey he plans to conduct in this case should a class be certified.

Courts have generally found consumer survey evidence to be admissible if a "qualified expert testifies that the survey was conducted according to generally-accepted principles of survey research." *Menasha Corp. v. News Am. Mktg. In-Store, Inc.*, 238 F.Supp.2d 1024, 1030 (N.D. Ill. 2003). Kemp's report describes his preliminary work towards designing a survey to measure a consumer's willingness to pay, a factor Williams will use in his economic modeling to create a "but-for" universe where the defects in the affected vehicles were disclosed. So far, Kemp has held focus groups to inform how he will craft survey questions and will develop the criteria to ask survey-respondents about. He describes how he will structure the choice experiment model to conform to reliable survey methodology. Williams describes the usefulness of such an experiment when determining expected utility and supply and demand curves. Together this methodology is reliable for the purpose of proposing that a method to calculate class-wide damages exists, and nothing bars expert opinions from working together to provide evidence on a similar topic.

Defendants' arguments go to the weight the Court should give the proposed methodology and address the merits of a completed survey, as opposed to whether the experts' testimony is admissible at the class certification stage. While an incomplete survey or opinion may present a reason to bar an opinion during the merits phase of a case, at the class certification stage Plaintiffs' experts are called upon to opine as to the Rule 23 requirements, which include determining whether damages can be determined on a class-wide basis. The survey need not be complete for the Court to determine whether the proposed methodologies are reliable. The methodologies proposed by Williams are based on accepted economic theories, and, likewise, Kemp's survey methodology tracks with the requirements for reliable survey research. He explains how he will control for bias and determine how to craft survey questions for an accurate picture. Plaintiffs have carried their burden of showing reliability of the methodologies proposed by Williams and Kemp.

Id. at **6-8; *see also Price v. L'Oreal*, 2018 WL 3869896, at *11 (S.D.N.Y., Aug. 15, 2018) (rejecting argument that an opinion like Dr. Glasgow's should be excluded because the expert offering the opinion "has not yet identified all the features he might test, has not decided how he will go about determining that set of features, and has not identified how he will present any such features to consumers in his survey."); *Hawes v. Macy's Stores West, Inc.*, 2022 WL 194407, at ** 4-5 (S.D. Ohio, Jan. 22, 2022) (declining to exclude opinions like those offered by Dr. Glasgow even though the expert's analysis was only "preliminary" and where the expert had not yet finalized the set of variables to be used in his regression analysis); *In Re Monostable Elec. Gearshift Litig.*, 382 F.Supp.3d 687, 696-99 (E.D. Mich.

2019) (rejecting argument that an opinion similar to Dr. Glasgow’s had to be excluded on the ground that the expert had “not yet developed” the elements of the conjoint analysis).

For all of these reasons, the Court declines to exclude Dr. Glasgow’s opinions on the ground that he has not provided sufficient details about the conjoint analysis he proposes to conduct. While the alleged lack of details may go to the weight that the Court ultimately assigns to Dr. Glasgow’s opinions, it does not require the wholesale exclusion of those opinions under Rule 702.

D

GM next argues that Dr. Glasgow’s opinions are unreliable because he failed to explain whether he will “incorporate the supply side [of the market] into his conjoint analysis.” (Glasgow Mot., ECF No. 131, PageID.10837.) Stated another way, GM complains that Dr. Glasgow failed to account for the facts that (1) the supply of Class Vehicles would have been affected – *i.e.*, decreased – if the defects had been disclosed and (2) that decrease in supply would have had an impact on price. According to GM, “[c]ourts routinely hold that an analysis of conjoint survey data that fails to properly account for a market’s supply-side factors is inherently unreliable and inadmissible.” (*Id.*, collecting cases).

But that does not seem to be true. As another court in this circuit recently observed, “the clear trend in the federal courts cuts against striking [a conjoint

analysis] report” based upon a “failure to consider supply-side considerations.” *Hawes*, 2022 WL 194407, *6. In fact, “while there are exceptions, a great majority of courts have declined to disqualify an expert who proposes to use real-world data” rather than “reconstruct[ing] the supply curve.” *Id.* Moreover (and in any event), Dr. Glasgow opined in his report that, if necessary, he could incorporate supply-side considerations into his final analysis. (See Glasgow Rpt., ECF No. 131-4, PageID.10957-10960.)

GM has failed to persuade the Court that it should exclude Dr. Glasgow’s opinions for supply-side reasons.

E

GM next contends that Dr. Glasgow’s opinions are unreliable because his methodology “impermissibly draws [survey] respondents’ attention to the alleged defect.” (Glasgow Mot., ECF No. 131, PageID.10840.) GM says that this flaw – known as “focalism” or “focal bias” – “invalidat[es] the resulting data.” (*Id.*)

The Court does not find GM’s charge of focal bias to be a persuasive reason to exclude Dr. Glasgow’s testimony for two independent reasons. First, Dr. Glasgow explained that he plans to design his study in a way that will actually *minimize* focal bias. Specifically, Dr. Glasgow said that the “between-subjects” design he plans to use will “attract less attention to the experimental treatment” because, unlike in a within-subjects design, the survey respondents will not be asked to directly compare

defective and non-defective Class Vehicles. (Glasgow Rebuttal, ECF No. 131-7, PageID.11119.) He further explained that “this view that between-subjects designs are less susceptible to survey response bias (including focalism bias) than within-subjects designs is generally accepted in the academic literature.” (*Id.*) Second, and in any event, the Court concludes that GM’s “focalism bias objection goes to the weight, not the admissibility, of [Dr. Glasgow’s] proposed analysis.” *Hadley v. Kellogg Sales Co.*, 324 F.Supp.3d 1084, 1109 (N.D. Cal. 2018); *see also Morales v. Kraft Foods Grp., Inc.*, 2017 WL 2598556, at ** 15-16 (C.D. Cal., June 9, 2017) (holding that alleged focalism bias “goes to the weight, not the admissibility of the challenged survey.”).

F

Next, GM argues that Dr. Glasgow’s opinions are unreliable because, according to GM’s expert, Dr. Glasgow’s “between-subjects” study design “has generally had little discussion in academic literature in the context of conjoint analysis” and because the specific approach “has been rejected by at least one court.” (Glasgow Mot., ECF No. 131, PageID.10839.) But Dr. Glasgow countered that “between-subjects” designs “are increasingly seen in the peer-reviewed academic literature,” (Glasgow Rpt., ECF No. 131-4, PageID.10941; *see also* Glasgow Rebuttal, ECF No. 131-7, PageID.11119-11122), and he identified studies showing that “between-subjects” designs are “less susceptible to survey response bias than

within-subjects designs.” (*Id.*, PageID.11119, 11122.) Furthermore, Plaintiffs have shown that at least one other court has found an analogous study design to be sufficiently reliable to allow the admission of a conjoint analysis. *See Johannessohn v. Polaris Industries, Inc.*, 450 F.Supp.3d 931, 972 (D. Minn. 2020).

At bottom, GM’s argument that the between-subjects design is unreliable boils down to a disagreement between GM’s expert and Dr. Glasgow, but a “difference of opinion is not a basis for exclusion of an expert opinion under *Daubert* standards.” *In Re Fisher-Price Rock ‘N Play Sleeper Mktg Sales Pracs. & Prods. Liab. Litig.*, 2021 WL 4988186, at *7 (W.D.N.Y., Oct. 19, 2021).

G

GM further asserts that Dr. Glasgow’s opinions are unreliable because Dr. Glasgow intends to tell the participants in his consumer surveys that the defects will “inevitably manifest,” even though the actual warranty data shows that the defect does not manifest in the “vast majority” of the putative Class Vehicles. (Glasgow Mot., ECF No. 131, PageID.10844.) But Dr. Glasgow explained that the disclosure he will use in his surveys will “accurately capture ... the rate of defect manifestation.” (Glasgow Rpt., ECF No. 131-4, PageID.10951.) The Court therefore declines to exclude Dr. Glasgow’s opinions on the ground that his survey will overstate the rate of defect manifestation.

H

Next, GM contends that the Court should exclude Dr. Glasgow's opinions because Dr. Glasgow "admit[ted] that he would need to manipulate both his market share values and his price elasticity values because the predicted values from his conjoint analysis will not align with observable real-world conditions." (Glasgow Mot., ECF No. 131, PageID.10842-10843.) The Court disagrees. Dr. Glasgow explained in his report that the calibration and rescaling techniques he proposes to employ are accepted and even preferred by economists because they help to account for unobserved factors. (*See* Glasgow Rpt., ECF No. 131-4, PageID.10965; *see also* Glasgow Rebuttal, ECF No. 131-7, PageID.11126-11129.) Dr. Glasgow also cited academic literature supporting this contention. (*See id.*) Under these circumstances, the Court concludes that any issues related to the adjustment of values used in Dr. Glasgow's study go to the weight of his opinions, not their admissibility.

I

GM next challenges Dr. Glasgow's opinions on the ground that Dr. Glasgow failed to account for the fact that some information concerning the defects was publicly available during the putative class period. (*See* Glasgow Mot., ECF No. 131, PageID.10844-10845.) GM has not persuaded the Court that the volume of the information and/or its potential accessibility so fundamentally undermines Dr. Glasgow's analysis as to make it unreliable. The Court concludes that any purported

failure by Dr. Glasgow to account for publicly-available information concerning the defects in the Class Vehicles goes to the weight, rather than the admissibility, of his opinions.

J

GM further argues that the Court should exclude Dr. Glasgow's opinions because his damages model "does not apply to former owners or to lessees" even though those individuals are encompassed within Plaintiffs' proposed class definitions. (*Id.*, PageID.16650.) However, the Court agrees with Plaintiffs that the remedy for this alleged deficiency, if any, would be to exclude from any certified classes the individuals who do not fit within the scope of Dr. Glasgow's opinions. *See In Re Marriott Int'l, Inc. Customer Data Sec. Breach Litig.*, 341 F.R.D. 128, 142 (D. Md. 2022) ("An overbreadth problem, however, 'can and often should be solved by refining the class definition[s] rather than by flatly denying class certification on that basis.'") (quoting *Messner v. Northshore Univ. HealthSys.*, 669 F.3d 802, 825 (7th Cir. 2012)).

K

Finally, GM argues that the Court should exclude Dr. Glasgow's opinions under Rule 403 for the same reasons that it should exclude the opinions under Rule 702. The Court declines to do so. GM has not persuaded the Court that the

admission of Dr. Glasgow's opinions would result in any unfair prejudice that substantially outweighs the probative value of the opinions.

L

For all of the reasons explained above, the Court declines to exclude the opinions of Dr. Glasgow. Most of GM's arguments go to the weight of Dr. Glasgow's opinions rather than their admissibility, *see Hadley*, 324 F.Supp.3d at 1106-1109 (explaining that several similar arguments seeking exclusion of an opinion similar to Dr. Glasgow's went to weight rather than admissibility), and the remaining arguments have not persuaded the Court that the opinions rest upon either an unreliable methodology or foundation. On the contrary, Plaintiffs have persuaded the Court that the foundation and methodology are sufficiently reliable so as to allow admission of Dr. Glasgow's opinions. Accordingly, GM's motion to exclude Dr. Glasgow's opinions is **DENIED**.

V

A

The Court next turns to GM's motion to exclude certain opinions advanced by Mr. Sullivan. (*See Sullivan Mot.*, ECF No. 132.) Mr. Sullivan is a consultant who has worked in various roles "over ... 39 years in the automotive industry." (*See Sullivan Rpt.*, ECF No. 123-17, PageID.8909.) He has experience in vehicle inspection, pre-release testing of motorcycle components, driver safety training, and

risk management consulting for commercial fleet operators. (*See id.*) For example, Mr. Sullivan has “performed pre- and post-production testing for motorcycle manufacturers” like the Yamaha Motor Corporation and the American Honda Motor Company. (*Id.*) And he has “received and conducted hundreds of hours of training including fundamentals and advanced training in vehicle mechanical and electronic systems testing and performance analysis.” (*Id.*)

Plaintiffs retained Mr. Sullivan “to evaluate information relating to the nature and sufficiency of GM’s pre-release validation testing in light of both GM’s internal validation testing protocols and automotive industry standards, whether GM learned of the defect(s) through such pre-release testing (or would have learned of the defect(s) had it conducted adequate pre-release testing), and the safety risks and other harms the defect(s) imposes on vehicle operators and occupants and other motorists.” (*Id.*, PageID.8908.) Mr. Sullivan ultimately reached six broad conclusions, two of which are relevant here.

First, Mr. Sullivan opined that “[t]he Defects in the combi-coolers and discharge lines imposed unreasonable health and safety risks on end users of Class Vehicles, as well as their passengers” (the “Health and Safety Risk Opinion”). (*Id.*, PageID.8932.) Specifically, Sullivan identified three distinct health and safety risks associated with the air conditioner defects in the Class Vehicles: (1) the defects could cause high cabin temperatures, which, in turn, could impair drivers’ cognitive

functions (the “Cognitive Function Risk”); (2) the high cabin temperatures could lead to heat stroke or other related physiological impairments (the “Heat Stroke Risk”); and (3) the defects could lead to an inability to de-fog the vehicle’s windshield and windows, which, in turn, could cause reduce visibility and thereby pose a safety risk (the “Visibility Risk”). (*See id.*, PageID.8928-8931.)

Second, Sullivan opined that GM “failed to subject the Combi-cooler and [air conditioner] discharge line used in the Class Vehicles to industry standard validation testing and, had GM done so, it likely would have uncovered defects in both components prior to approving them for use and equipping them in Class Vehicles” (the “Validation Testing Opinion”). (*Id.*, PageID.8932.)

B

GM has moved to exclude both Sullivan’s Health and Safety Risk Opinion and his Validation Testing Opinion. (*See* Sullivan Mot., ECF No. 132.) For the reasons explained below, GM’s motion to exclude the Health and Safety Risk Opinion is **GRANTED IN PART** and **DENIED IN PART**, while the motion to exclude the Validation Testing Opinion is **DENIED**.

1

GM argues that the Court should exclude the Health and Safety Risk Opinion in its entirety because “Mr. Sullivan is not qualified to opine on human health and safety.” (*Id.*, PageID.11350.) The Court agrees that Mr. Sullivan is not qualified to

testify about the Cognitive Function Risk and/or the Heat Stroke Risk, but the Court finds that his testimony about the Visibility Risk is admissible.

a

Mr. Sullivan is not qualified to testify about the Cognitive Function Risk because he has no education, experience, or expertise that equips him to reliably opine about the impact of temperature on cognitive functioning. Likewise, Mr. Sullivan is not qualified to testify about the Heat Stroke Risk because he has no education, experience, or expertise that gives him a reliable basis on which to opine about the physical health impacts of high temperatures. Indeed, Mr. Sullivan readily admitted during his deposition that he has not received any medical training and has never been qualified as an expert in human health. (*See* Sullivan Dep., ECF No. 132-5, PageID.11537-11538.) Simply put, Mr. Sullivan’s education and experience relate to vehicle safety and safe driving training and techniques, but those qualifications do not “provide a foundation for [him] to answer [any] specific question[s]” about the impact of heat on a driver’s mental functioning or physical health. *Berry*, 25 F.3d at 1351.

Plaintiffs offer several counterarguments, but none persuade the Court that Mr. Sullivan is qualified to opine about the Cognitive Function Risk or the Heat Stroke Risk. First, Plaintiffs contend that Mr. Sullivan is qualified to opine as to those risks because those opinions do not “relate to ‘human health’ generally,” but,

instead, are relate only to “*driver* safety, a subject that falls squarely in [Sullivan’s] wheelhouse.” (Sullivan Resp., ECF No. 149, PageID.15126; emphasis in original.) The Court disagrees. Mr. Sullivan’s opinions concerning the Cognitive Function Risk and the Heat Stroke Risk are inextricably intertwined with matters of cognitive and physical health. Indeed, the Cognitive Function Risk opinion rests upon the premise that the heat resulting from the lack of air conditioning will meaningfully impair cognitive performance, and the Heat Stroke Risk opinion rests on the premise that the heat will cause serious physical impairments, including heat stroke. Thus, contrary to Plaintiffs’ characterization, the Cognitive Function Risk opinion and the Heat Stroke Risk opinion involve far more than mere “driver safety.” Because the opinions rest upon foundational premises of cognitive and physical impairment that are well beyond Mr. Sullivan’s expertise, he is not qualified to offer them.

Second, Plaintiffs contend that Mr. Sullivan’s experiences in risk management consulting and driver safety training qualify him to offer the Cognitive Function Risk opinion and the Heat Stroke Risk opinion. (*See id.*, PageID.15123-15124.) But Plaintiffs have failed to identify any specific element of Mr. Sullivan’s risk management and driver safety training that qualifies him to opine about matters of cognitive function and/or heat stroke.

Third, during the hearing before the Court, Plaintiffs suggested that Mr. Sullivan is qualified to opine about the Cognitive Function Risk and the Heat Stroke

Risk because, over the course of his thirty-nine-year career, he has interacted with drivers who have experienced the impacts of defective air conditioning units. Plaintiffs suggested that those drivers have regularly reported to Mr. Sullivan the cognitive and physical effects of high temperatures, and Plaintiffs argued that Mr. Sullivan's repeated interactions with drivers about these effects qualify him to offer opinions about the Cognitive Function Risk and the Heat Stroke Risk. But the evidence Plaintiffs cited in support of this line of argument does not support it. Plaintiffs pointed the Court to page 244, line 4 of Mr. Sullivan's deposition. However, that portion of the deposition does not concern the cognitive impacts of high temperatures; instead, at that portion of the transcript, Mr. Sullivan merely explained that some drivers that he had interacted with told him that they were distracted by having their windows fog up. (*See* Sullivan Dep., ECF No. 148-3, PageID.14997.) Plaintiffs have not identified any evidence in the record suggesting that Mr. Sullivan's interactions with drivers qualify him to offer opinion testimony about the Cognitive Function Risk or the Heat Stroke Risk.

For all of these reasons, the Court concludes that Mr. Sullivan is not qualified to offer opinion testimony concerning the Cognitive Function Risk or the Heat Stroke Risk, and the Court will preclude him from offering that testimony.

b

On the other hand, the Court concludes that Mr. Sullivan is qualified to offer expert testimony about the Visibility Risk – *i.e.*, his opinion that the alleged defects pose a driver safety risk because they impair the ability of the Class Vehicles to de-fog their windshields and windows. First, Mr. Sullivan has extensive experience teaching and coordinating driver safety training classes, and he has authored vehicle safety policies on behalf of numerous clients. (*See* Sullivan Rpt., ECF No. 123-17, PageID.8923.) These experiences qualify him to testify about how decreased visibility may compromise driver safety. Second, as explained above, Mr. Sullivan has interacted directly with many drivers who reported that an inability to de-fog their windows exposed them to safety risks. (*See* Sullivan Dep., ECF No. 148-3, PageID.14997.) Mr. Sullivan is certainly qualified to opine about the manner in which decreased visibility may undermine driver safety.

The Court also rejects GM’s additional argument that Mr. Sullivan’s testimony concerning the Visibility Risk is not supported by a reliable foundation. GM highlights, among other things, a post on the website of the National Highway Transportation Safety Agency (“NHTSA”) stating that a malfunctioning air conditioning system does not pose a safety risk, and GM suggests that Mr. Sullivan has no reliable basis for contending otherwise. (*See* Sullivan Mot., ECF No. 132, PageID.11370-11371.) But the Court concludes that Mr. Sullivan’s experiences –

outlined above – provide a reliable foundation his opinions concerning the Visibility Risk, and under these circumstances, any conflict between those opinions and NHTSA’s view go to the weight of his opinions, not to their admissibility.

GM also contends that Mr. Sullivan’s opinions concerning the Visibility Risk lack a reliable foundation because he acknowledged that it is possible to manually de-fog a windshield even when a vehicle’s air conditioning system is not properly functioning. (*See id.*) But Mr. Sullivan explained in his report why the ability to manually de-fog a window does not necessarily eliminate the Visibility Risk:

GM’s alternative methods to de-fog a window will have varied efficacy depending on the environmental and other conditions internal and external to the vehicle including, vehicle speed, internal and external temperature, internal and external humidity including mist and rain, and what, if any wiping materials (towels, napkins, etc.) are readily available. Moreover, based on my decades of experience in the automotive industry, the average customer may also not possess the requisite knowledge of alternative methods to de-fog their windshield or understand how to implement some or all of the methods described by GM.

(Sullivan Rpt., ECF No. 123-17, PageID.8929-8930.) The Court is satisfied that this explanation – based upon Mr. Sullivan’s experience working with drivers and teaching driver safety – provides a reliable foundation for his opinion that the air conditioner defect poses the Visibility Risk even though it may be possible for a driver to manually de-fog a window when her air conditioning system is not working

properly. Thus, the Court concludes that Mr. Sullivan's testimony about the Visibility Risk is admissible.

2

GM next argues that the Court should exclude Mr. Sullivan's Validation Testing Opinion because "he has never designed or conducted vehicle or component level development or validation testing, nor does he provide any reliable basis for speculating that different testing would have led GM to learn of the alleged defects." (Sullivan Mot., ECF No. 132, PageID.11372-11373.) The Court disagrees.

Mr. Sullivan has relevant professional experience with validation testing, and that experience both qualified Mr. Sullivan to offer the Validation Testing Opinion and provided a sufficiently reliable foundation for that opinion. As noted above, Mr. Sullivan has "performed pre- and post-production product testing for motorcycle manufacturers" like the Yamaha Motor Corporation and the American Honda Motor Company. (Sullivan Rpt., ECF No. 123-17, PageID.8909.) And those experiences working with motorcycle manufacturers required Mr. Sullivan to study and apply engineering and testing standards promulgated by, among other organizations, the Society of Automotive Engineers ("SAE"). (*See id.*) Those engineering and testing standards, in turn, overlap with the standards that automotive manufacturers like GM use in pre-release validation testing. (*See id.*, PageID.8908, 8923.) Indeed, Mr. Sullivan explained that when he studied GM's internal testing documents, he

discovered that GM applied at least one SAE testing standard to the parts at issue here. (*See id.*, PageID.8923.) Moreover, Mr. Sullivan knows how the testing standards are implemented and applied, and he therefore has a reasonable basis from which to conclude that if GM had properly applied the prevailing appropriate standards, it would have discovered the air conditioning defect. The Court concludes that GM’s criticisms of Mr. Sullivan’s Validation Testing Opinion expose “mere weakness[] in the factual basis” of that opinion – weaknesses that “bear on the weight of the evidence rather than on its admissibility.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530. The Court thus concludes that Mr. Sullivan’s Validation Testing Opinion is admissible under Rule 702.

3

As it does in its other three motions, GM also asserts a separate argument that Mr. Sullivan’s opinions should be excluded under Rule 403 because his testimony would “unfairly prejudice” GM. (Sullivan Mot., ECF No. 132, PageID.11375.) In this argument, GM reasserts the same grounds for exclusion that it put forth under Rule 702. But the Court has concluded that Mr. Sullivan’s testimony satisfies the requirements for admission under Rule 702, and thus it will not exclude the testimony under Rule 403.

VI

A

Finally, the Court turns to GM’s motion to exclude certain opinions advanced by Mr. Marshall. (*See* Marshall Mot., ECF No. 133.) Mr. Marshall is a licensed professional engineer who specializes in metallurgical engineering and corrosion engineering. (*See* Marshall Rpt., ECF No. 134-1, PageID.11738.) Over the course of his career, he has “examined and analyzed thousands of failed metallic and non-metallic components,” including “failure analyses of malfunctioning motor vehicle components and testing of vehicle components.” (*Id.*)

Plaintiffs retained Mr. Marshall to “perform a materials engineering investigation of air conditioning system components from several General Motors pickup and sport utility vehicles.” (*Id.*, PageID.11736.) During his investigation, Mr. Marshall examined 25 combi-coolers and 22 air conditioner discharge lines. (*See id.*, PageID.11741.) He reached a number of opinions based upon his investigation. As relevant here, he concluded that both the air conditioner Discharge Line and the combi-cooler “fail[]prematurely due to cracking” (the “Premature Cracking Opinions”). (*Id.*, PageID.11757, 11762.)

B

GM has moved to exclude the Premature Cracking Opinions on the ground that they “lack foundation and are not the product of reliable scientific methodology.” (Marshall Mot., ECF No. 133, PageID.11702.) The Court agrees that the Premature Cracking Opinions should be excluded for those reasons.

Mr. Marshall has no basis to conclude that the parts at issue here failed *prematurely* because he has no knowledge of their intended lifespan. Indeed, Mr. Marshall confirmed during his deposition that he had no independent knowledge of how long the component parts were designed to last, and he did no testing or analysis himself to ascertain their intended lifespans. (*See* Marshall Dep., ECF No. 144-2, PageID.14118.) In short, since Mr. Marshall does not know how long the parts were designed to last, he has no reliable basis for opining that they failed too early.

Plaintiffs counter that Mr. Marshall did have a reliable basis for that conclusion because he examined the maintenance manuals for the Class Vehicles and discovered that the manuals do not state that any of the parts at issue would ever need to be replaced. (*See* Marshall Resp., ECF No. 144, PageID.14092; *see also* Marshall Dep., ECF No. 144-2, PageID.14117.) Plaintiffs say that it was reasonable for Mr. Marshall to deduce that any failure by the parts would be premature since the parts were not listed as needing to be replaced in the manuals.

But Mr. Marshall's deductions from the maintenance manuals do not warrant admission of his testimony because Plaintiffs have not shown that those deductions rested in any way upon Marshall's training, experience, or expertise. For instance, Plaintiffs did not cite any evidence that (1) Mr. Marshall was familiar with how automakers compile and draft maintenance manuals and (2) from that experience, he learned that automakers omit from those manuals any mention of parts that are intended to last forever. Instead, as Plaintiffs' counsel made clear during the hearing before the Court, Mr. Marshall merely applied common sense principles when he reasoned that the parts at issue were never expected to fail because they were not listed as needing replacement in the manuals. In counsel's words, Mr. Marshall reasonably recognized that "the whole point...of a maintenance manual" is to identify the parts that will require replacement.⁴ Since Mr. Marshall's deductions from the contents of the maintenance manuals rest upon nothing more than a straightforward application of common-sense principles, those deductions are not properly the subject of expert opinion testimony. *See Churchwell v. Bluegrass Marine, Inc.*, 444 F.3d 898, 905 (6th Cir. 2006) (explaining that "expert testimony does not assist" the jury and should not be admitted "where the jury has no need [] for an opinion because it easily can be derived from common sense, common

⁴ The final transcript of the hearing is not yet available. But the Court has reviewed the Zoom video of the hearing and has confirmed the accuracy of the quote above.

experience, the jury's own perceptions, or simple logic.") (quoting 29 Charles Alan Wright & Victor James Gold, *Federal Practice and Procedure* § 6274 (1997)).⁵ Plaintiffs are free to argue to the jury that the parts at issue failed prematurely because, under a straightforward interpretation of maintenance manuals, the parts should never have failed, but Plaintiffs may not offer Mr. Marshall's testimony that the parts failed too early. The Court will therefore exclude the Premature Cracking Opinions.

VII

For all of the reasons explained above, **IT IS HEREBY ORDERED** as follows:

- GM's Motion to Exclude Opinions and Testimony of Plaintiffs' Expert Dr. S.A. Sherif (ECF No. 130) is **DENIED**;
- GM's Motion to Exclude Opinions and Testimony of Plaintiffs' Expert Dr. Garrett Glasgow (ECF No. 131) is **DENIED**;

⁵ GM also argues that Mr. Marshall's conclusion that the component parts in *all* of the Class Vehicles are susceptible to premature failing lacks foundation because he only performed "a limited metallurgical analysis on 42 sample combi-coolers and [air conditioning] discharge lines, including 22 used parts primarily pulled from junkyards and totaled vehicles." (*See* Marshall Mot., ECF No. 133, PageID.11710.) GM suggests that this small sample size was not representative of the component parts in all of the Class Vehicles. (*See id.*, PageID.11720.) Because the Court has already concluded that Mr. Marshall's conclusion lacks foundation, it need not resolve this dispute.

- GM's Motion to Exclude Opinions and Testimony of Plaintiffs' Expert Peter J. Sullivan (ECF No. 132) is **GRANTED IN PART AND DENIED IN PART** as described above; and
- GM's Motion to Exclude Opinions and Testimony of Plaintiffs' Expert L. Scott Marshall (ECF No. 133) is **GRANTED**.

IT IS SO ORDERED.

s/Matthew F. Leitman
MATTHEW F. LEITMAN
UNITED STATES DISTRICT JUDGE

Dated: February 24, 2023

I hereby certify that a copy of the foregoing document was served upon the parties and/or counsel of record on February 24, 2023, by electronic means and/or ordinary mail.

s/Holly A. Ryan
Case Manager
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